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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,660	12/28/2000	Behrang Behin	ONX-105	8890
27652	7590	10/20/2003	EXAMINER	
JOSHUA D. ISENBERG 204 CASTRO LANE FREMONT, CA 94539			ROJAS, OMAR R	
			ART UNIT	PAPER NUMBER
			2874	

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 09/751,660	Applicant(s) BEHIN ET AL.	
	Examiner Omar Rojas	Art Unit 2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on December 28, 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                 | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____   |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)        | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### ***R sponds to Arguments***

1. Applicant's arguments with respect to claims 1-51 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. **Claims 1-2, 4-24, and 26-36 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by U.S. Patent 5,959,760 to Yamada et al. ("Yamada"), provided by Applicant(s).**

Regarding claims 1 and 23, Yamada discloses a two-dimensional scanner (see Figs. 12A-12B) comprising: a base (1); an outer frame (11) rotatably attached to the base; an inner part (2) rotatably attached to the outer frame (11); a first set of comb fingers (12) attached to the outer frame (11); a second set of comb fingers (7) attached to the base (1)

Regarding claims 2 and 24, see col. 10, ll. 9-13 of Yamada.

Regarding claims 4-10 and 26-32, Yamada further discloses that the comb-type drive electrodes (i.e., 7, 12) act as capacitors and thus provide positional sensing, as well as driving means and angular/rotational motion for between the base, inner part, and outer part. See col. 6, ll. 49-64. Thus, all the limitations of claims 4-10 and 26-32 are substantially met by Yamada.

Art Unit: 2874

Regarding claims 11-18, Yamada discloses a third set of comb fingers (5) attached to the inner part (2) and a fourth set of comb fingers (15) attached to the outer frame (11). These comb fingers along with the first and second set of comb fingers (12, 7) operate and comprise means that substantially meet all the limitations of claims 12-18 with any undisclosed means being inherent in Yamada. Id. at column 9, line 34-column 10, line 29.

Regarding claims 19-22 and 33-36, Yamada discloses numerous torsional beams (3a, 3b, 14a, 14b) which have: rectangular and/or T-shaped cross-sections; facilitate rotational motion; connect the inner part (2) to the outer frame (11); and connect the outer frame to the base (1).

***Claim Rejections - 35 USC § 103***

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**5. Claims 3 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamada as applied to claims 2 and 24 above.**

Regarding claims 3 and 25, Yamada differs from the claimed invention in that Yamada has not disclosed means for applying a constant biasing force between the outer frame and the base.

However, the Applicant(s) have not disclosed a perceived criticality for this added feature. Furthermore, the invention of the Applicant(s) appears to work just as well without the recited means of claims 3 and 25. Thus, the limitations of claims 3 and 25 appear to be an obvious design choice in view of Yamada.

The ordinary skilled artisan at the time of the claimed invention would have wanted to add means for applying a constant biasing force between the outer frame and the base of Yamada in order to provide an alternative and equivalent means for rotating the outer frame with respect to this base.

Therefore, it would have been obvious to one of ordinary skill at the time of the claimed invention to obtain the invention specified by claims 3 and 25.

**6. Claims 37-51 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,097,859 to Solgaard et al. ("Solgaard") in view of Yamada as applied to claims 1-36 above.**

Regarding claims 37-51, Solgaard discloses a fiber-optic switch (10) comprising: an array of input optical fibers (14); one or more arrays of mirrors (48); an array of output fibers (24); and microlenses (26, 32).

Solgaard does not appear to expressly disclose the same type of two-dimensional scanner as recited by claims 37-51.

Yamada, as previously discussed, discloses basically the same type of two-dimensional ("2-D") scanner recited by claims 37-51. See sections 4-5 above. The limitations of claims 1-36 not expressly disclosed by Yamada have further been shown to be obvious design choices. See section 6 above.

The ordinary skilled artisan would have sought to use the 2-D scanner of Yamada to control the mirror arrays (48) in Solgaard because Yamada provides "a large [mirror] deflection angle with a low applied voltage." See Yamada at col. 2, ll. 46-48.

Art Unit: 2874

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the claimed invention to modify Solgaard in view of Yamada to obtain the invention specified by claims 37-51.

### ***Conclusion***

7. Since the Yamada reference used in the above rejection was submitted by Applicant(s) in the prior art statement, no copies thereof are provided with this Office action.

Since the Solgaard reference used in the above rejection was provided with a previous Office action, no copy thereof is being provided with this Office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Omar Rojas whose telephone number is (703) 305-8528 and whose e-mail address is *omar.rojas@uspto.gov*. The examiner can normally be reached on Monday-Friday (7:00AM-3:00PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hemang Sanghavi, can be reached on (703) 305-3484. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9318 for regular communications. The fax phone number for After Final communications is (703) 872-9319. The examiner's personal work fax number is (703) 746-4751.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


Application/Control Number: 09/751,660

Page 6

Art Unit: 2874

Omar Rojas  
Patent Examiner  
Art Unit 2874

or  
October 8, 2003



HEMANG SANGHAVI  
PRIMARY EXAMINER